1.0 INTRODUCTION

1.1 PROJECT OBJECTIVES

The California Environmental Quality Act (the State CEQA) Guidelines (Section 15126.6.a) require that a range of reasonable alternatives to the proposed Project must be described and analyzed, and feasibly attain most of the basic objectives of the Project. Therefore, in order to explain the need for the proposed Project, and to guide in development and evaluation of alternatives, Cabrillo Power I LLC (hereafter referred to as Applicant) was asked to define its Project objectives, which are listed below.

The Applicant proposes to reconstruct a 200-foot long extension to an existing 378-foot long jetty located at the northern inlet to Agua Hedionda Lagoon. When completed, the extended jetty would be approximately 578 feet long. When initially constructed in 1954, both inlet jetties were longer than their present day length. The restored portion of the northern jetty would be contained within the original historical footprint of the jetty and would be visually compatible with the existing jetty, being constructed of materials and in a manner similar to the existing jetties. The new section of jetty would be the same width and height as the existing jetty, approximately 55 to 70 feet wide and rising about 10 feet from the bottom. The height of the extended jetty will vary from about 6 feet above Mean Lower Low Water (MLLW) at the tip, to about 14 feet above MLLW on the landward end.

The basic objectives of the proposed Project, as identified by the Applicant and described in the March 2001 Notice of Preparation (NOP), are to:

- Mitigate expected cumulative sedimentation impacts to Agua Hedionda Lagoon associated with implementation of the SANDAG Regional Beach Sand Project and regulatory requirements to back-pass sand recovered from the Lagoon to the north of the inlet channel;
- Maintain the existing longshore transport process in the vicinity of the Lagoon by increasing the sand by-passing rate and making more sand available down-coast between dredge events;
- Minimize potential effects on biological resources – Several alternative jetty configurations were assessed for their potential to bury bottom habitat. The proposed Project, due to its relatively small footprint, would have a correspondingly smaller direct impact (0.4 acres) on biological resources;
- Increase sand volume available to down-coast cities between dredge events - The jetty restoration Project would increase the amount of sand in the littoral system down coast of Agua Hedionda Lagoon between dredge events by

increasing the rate and volume of sand bypassing the lagoon mouth. This is a key regional benefit of the proposed Project;

- Issuance of a new right of way easement by the CSLC for the inlet channel to facilitate the Applicant's continued use of Agua Hedionda Lagoon for cooling water for the Encina Generating Station (Station); and
- Limit the frequency of maintenance dredging in Agua Hedionda Lagoon (Lagoon) to allow continued economical use of the Lagoon.

The Applicant, and the previous owner, San Diego Gas & Electric, have conducted maintenance dredging in the Lagoon more than 25 times since 1954, typically at intervals of about two years. The Applicant is concerned that on-going and future beach restoration programs in the vicinity of the Lagoon could increase sedimentation in the Lagoon, and result in the need for more frequent maintenance dredging. The Applicant believes that the proposed 200-foot long jetty extension will limit Lagoon sedimentation because (1) the increased distance between the jetty tips will result in an increased effective width of the Lagoon inlet channel; and (2) extension of the jetty structure into greater water depths will result in an increase in the average effective depth of the Lagoon inlet channel. It is believed these modifications will control the rate of sedimentation in the Lagoon and limit the need for maintenance dredging, but will allow continued down-coast migration of sand.

1.2 PURPOSE AND NEED

Understanding the proposed Project's functional characteristics requires an understanding of the coastal processes at work in and around the Lagoon. In the context of the coastal process within the vicinity of the Lagoon, the effect of the operational requirements of the Station, located on the southern shore of the Lagoon, is to accelerate the rate of sedimentation that would occur in the absence of the Station, as explained below.

Like other coastal lagoons, Agua Hedionda Lagoon functions as a sediment sink and is subject to two daily high and low tides. Unlike other lagoons, Agua Hedionda Lagoon is dominated by a nearly continual incoming surge of seawater and littoral sediment. Typically, the incoming tides carry littoral sediments into lagoons and outgoing tides flush sediments out of the lagoons. In general, natural sedimentation in coastal lagoons occurs because the forces (flood tides and waves) moving sediment into the lagoon are greater than the forces (ebb tides) moving sediment out of the lagoon. Over time, sedimentation increases because the ebb tide forces decrease as more sedimentation accumulates in the lagoon. However, at Agua Hedionda Lagoon the effectiveness of the

Lagoon's natural sedimentation process is increased by the presence of the Station that relies on seawater for cooling purposes. Peak operations of the Station can require more than 800 million gallons per day (gpd) of seawater for cooling purposes. Seawater enters the Lagoon through the inlet channel created by the inlet jetties. Seawater used by the Station for cooling is discharged through a set of jetties known as the outlet jetties. Thus, because most of the seawater that enters the Lagoon is discharged through the outlet jetties, the prevailing direction of seawater flow is through the inlet channel. The net result of this is that the Lagoon is flood dominated, which is to say that more water and sand flow into the Lagoon than is flushed out each day. Over time, the diminished sediment carrying efficiency of ebbing tides results in the accumulation of sand in the outer basin of the Lagoon.

Because of the characteristics described above, Agua Hedionda Lagoon is characterized as a "flood dominant" lagoon. This concept is important for two reasons. First, the flood dominance of Agua Hedionda Lagoon results in the creation of a localized "vacuum effect" on seawater and littoral drift. Second, because of the vacuum effect, Agua Hedionda Lagoon responds more aggressively than other coastal lagoons to beach nourishment programs, i.e., the more sand in the system, the more sand in the Lagoon.

Implementation of the proposed Project would extend only the northern inlet jetty. By extending only one jetty, the jetties would be offset relative to one another. Offset jetties would reduce the vacuum effect of the Lagoon. Specifically, the proposed Project is designed to reduce the efficiency of the vacuum effect of the Lagoon on littoral drift by increasing the effective width of the Lagoon inlet channel, by increasing the distance between jetty tips and increasing the effective depth of the Lagoon inlet channel, and by extending the structure into greater water depths.

Implementation of the proposed Project would allow more sand to bypass the Lagoon mouth by decreasing the trapping efficiency of the Lagoon. Because of the relatively short length of the jetty combined with the vacuum effect of the Lagoon, sand would move around the new, longer jetty, remaining in active littoral transport and continue its transport along the coast. The 200-foot jetty restoration represents a balance between reducing sand influx into the Lagoon and increasing littoral transport to minimize down-coast impacts.

1.3 PURPOSE AND SCOPE OF EIR/EA

Section 15124(d) of the the State CEQA Guidelines requires that an Environmental Impact Report (EIR) contain a statement within the Project description briefly describing the intended uses of the EIR. The State CEQA Guidelines indicate that the EIR should identify the ways in which the Lead Agency and any responsible agencies would use this document in their approval or permitting processes. The following discussion summarizes the roles of the agencies and the intended uses of the EIR.

The CSLC is serving as the Lead Agency responsible for preparing the EIR. The Applicant has an easement (PRC 871.1) from the CSLC to maintain the existing northern jetties. The EIR will be used by the CSLC in making its decision to issue a new right of way easement, which will include construction of a 200-foot restoration of the most northerly inlet jetty. The California Coastal Commission and the Regional Water Quality Control Board, San Diego Region, will also use the EIR/Environmental Assessment (EIR/EA) in making their respective discretionary permitting decisions. The Coastal Commission must decide whether to amend the existing Coastal Use Permit for the Station and the Regional Water Quality Control Board must issue or waive a Section 401 Water Quality Certification for the proposed Project.

The proposed Project will also be approved or reviewed by a number of Federal agencies, including the U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), and U.S. Coast Guard. As a result, the document is being prepared as an EIR/EA. The ACOE may or may not use the EIR/EA for their discretionary decision-making under Section 10 of the Rivers and Harbors Act and Section 404 of the Federal Water Pollution Control Act. The ACOE staff has no objection to the use of EA in the title of the document, but reserves the right to develop a separate document, either an EA or an Environmental Impact Statement (EIS), to support their review of the proposed Project under the National Environmental Policy Act (NEPA) (Personal Communication 2001).

1.4 PUBLIC REVIEW AND COMMENT

1.4.1 Scoping

On March 22, 2001, pursuant to the State CEQA Guidelines (Sections 21080.4 and 15082(a)), the CSLC provided an NOP for the proposed Project to responsible and trustee agencies and to other interested parties. The NOP solicited both written and verbal comments on the EIR/EA's scope during a 30-day comment period and provided information on a forthcoming public scoping meeting. The CSLC held a public and

agency scoping meeting in Carlsbad, California on April 20, 2001, to solicit verbal comments on the scope of the EIR/EA. Written comments were received in response to the NOP from the following: the City of Solana Beach; San Diego Association of Governments (SANDAG); the California Regional Water Quality Control Board, San Diego Region; and the California Department of Fish and Game (CDFG). A copy of the NOP, mailing list, meeting transcript, and letters received, as well as an index of where such comments are addressed in the document, are included in Appendix A.

1.4.2 Public Comment on the Draft EIR/EA

This Draft EIR/EA is being circulated to local and state and federal agencies and to interested individuals who may wish to review and comment on the report. Written comments may be submitted to the CSLC during the 45-day review period. Verbal and written comments on the Draft EIR/EA will be accepted at a noticed public meeting (either noticed in this document or under separate cover). All comments received will be addressed in a Response to Comments addendum document, which, together with the Draft EIR/EA, will constitute the Final EIR/EA.

This EIR/EA identifies the environmental impacts of the proposed Project on the existing environment, indicates how those impacts will be mitigated or avoided, and identifies and evaluates alternatives to the proposed Project. This document is intended to provide the CSLC the information required to exercise its jurisdictional responsibilities for issuance of a new right of way easement, which would be considered at a separate noticed public meeting of the CSLC.

The CEQA requires that a Lead Agency shall neither approve nor implement a Project as proposed unless the significant environmental impacts have been reduced to an acceptable level (Section 15091). An acceptable level is defined as eliminating, avoiding, or substantially lessening significant impacts to below a level of significance. If the Lead Agency approves the Project even though significant impacts identified in the EIR/EA cannot be fully mitigated, the agency must state in writing the reasons for its action. Findings and a Statement of Overriding Considerations (SOC) must be included in the record of Project approval and mentioned in the Notice of Determination (NOD).